

NEW ZEALAND THOROUGHBRED RACING

POLICY ON CONCUSSION MANAGEMENT, NEUROPSYCHOLOGY TESTING AND THE RETURN TO RIDING FOLLOWING A CONCUSSION.

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1. Introduction

NZTR recognises the importance of and has responsibilities for the health, safety and wellbeing of the jockeys who ride under its jurisdiction. It recognises concussion as an important risk in the sport and this Policy provides the framework for how this will be managed.

2. What is Concussion

Concussion is a term used to describe a mild traumatic brain injury (mTBI) that is caused by forces transmitted to the brain following a direct blow to the head, or a blow to another part of the body that results in rapid movement of the head such as with a whiplash effect. This results in a disturbance of brain function via a number of potential mechanisms.

These mechanisms include a temporary disturbance of brain physiology and possibly blood flow mismatch causing an energy crisis, abnormal neuronal depolarization with or without microscopic damage to neurons, and a post-injury inflammatory reaction. There can also be associated injuries to other parts of the head and neck that cause concussion-like symptoms

3. Initial Effects of Concussion/mTBI

The initial disturbance in brain function can result in immediate and/or delayed symptoms and impairment of a number of important brain functions. Common symptoms and signs of concussion include, headache, dizziness, visual problems, nausea, feeling dazed, and balance problems. It is important to understand that only about 10% of concussions result in loss of consciousness. It can also cause sleep disturbances and temporary mood disturbances.

Impairments to brain function include level of consciousness, information processing, reaction time, ability to concentrate, short term memory, and coordination. If a jockey continues to ride or returns to riding too soon, these impairments are likely to cause a reduction in riding performance and increase the risk of injury. With a horse of 500kg moving at up to 60 – 70kph, the risk of significant if not catastrophic injury is very real. It is therefore important that concussions are recognised and Riders removed from riding until assessed and cleared to return.

There is also a very rare but potentially fatal complication of concussion known as Second Impact Syndrome. This condition is not fully understood but it is thought to occur when an individual sustains another (or more) concussive episode(s) shortly after the initial injury, usually on the same day. There is then a rapid onset of brain swelling which is very difficult to treat and is often fatal. It appears to affect adolescents and young adults. This is another reason why it is so important that individuals who sustain a concussion or suspected concussion are removed from their sporting activity and not permitted to return until cleared to do so by a health care professional.

4. Diagnosis of Concussion

Unfortunately, there is no single diagnostic test available for concussion and diagnosis is based on the mechanism of injury, observations of symptoms and signs immediately following the injury event, and a multimodal clinical assessment undertaken by health care professionals.

For a concussion diagnosis to be accepted for cover by ACC, this must be made by a doctor, usually in the Emergency Department or by the individual's GP, and a claim form submitted to ACC.

5. Recovery Following Concussion

The recovery time from a concussion is very variable between individuals and in the same individual over time, after each injury. Most individual's symptoms resolve within a few days or weeks, but some can take longer. Research has however shown that changes in brain physiology and function can persist beyond the resolution of symptoms. It is therefore important that Riders undertake a graduated return to riding to enable and residual impairments to be identified before returning to full racing.

6. Medium Term and Long-Term Effects of Concussion

It is estimated that around 20% of individuals who sustain a concussion develop Persistent Post-Concussion Symptoms (PPCS), which is defined as symptoms persisting beyond 3 months post-injury. The causes of PPCS are well recognised as being multifactorial and can be characterised as falling within one or more of the following domains:

- Physical – headaches, fatigue etc...
- Cognitive impairment
- Emotional/mood issues
- Neck dysfunction
- Balance/vision dysfunction

Riders with PPCS will not be permitted to return to riding until they have recovered and cleared to do so by the NZTA Medical Officer. The management of jockeys with PPCS will usually be undertaken within the ACC Concussion Service. It is imperative therefore that jockeys understand the critical importance of obtaining an early diagnosis from their GP to ensure that their injury is covered should they develop PPCS.

There is ongoing debate about the potential long term health effects of concussion. These include early onset Mild Cognitive Impairment, Chronic Traumatic Encephalopathy (CTE) and other neurodegenerative diseases. CTE has received a lot of attention in the media and is characterised by slow, progressive neurodegeneration resulting in memory disturbances, behavioral or personality changes, and speech and/or gait abnormalities. An association between repetitive head impacts and the development of CTE has been shown in the scientific research. The incidence and exact nature of this association is however still unclear.

NZTR recognises the potential risk of long-term brain health effects of repetitive head impacts and through this Policy aims to mitigate that risk as far as is reasonably practicable. The role of other health risk factors on long term brain health is however also recognised and advice to Riders on this will be provided through NZTR health and wellbeing guidance and initiatives.

7. Requirements for the Granting of a Rider Licence

All Rider Licences granted by NZTR, are granted on the condition that the Rider successfully undertakes a Baseline Neurocognitive Test prior to being granted a licence and thereafter at intervals of not more than 2 years and that the Rider complies with NZTR Concussion Management Protocols.

8. Baseline Neurocognitive Testing

To assist with the determination of the diagnosis and recovery following a concussion or suspected concussion it is of value to have a measure of each jockey's neurocognitive function prior to the injury. This enables any post-injury testing to be compared to this pre-injury baseline.

Over time, with repeated testing it also enables the monitoring of Rider's neurocognitive function so that any decline can be identified, and further assessment undertaken as required.

In submitting themselves for a Neurocognitive Test at any time, a Rider agrees that the results of the test may be used by NZTR or an appropriate health care agent authorised by it, for the purposes of determining whether the Rider is fit to ride horses in races, trials, jump outs or in training.

Details on this testing are contained in the NZTR Concussion Management Clinical Protocols

9. Initial Management of Suspected Concussions

At racing events and training under the jurisdiction of NZTR, all suspected concussions are to be managed in accordance with this Policy and the venue injury management procedures.

A Rider who experiences any incident which could cause concussion must be assessed by a suitably trained person (as determined by NZTR) before riding in any further races.

Incidents which could cause concussion include (but are not limited to) any blow to the head, a fall whilst riding a horse, sudden acceleration or deceleration of the head, being kicked or stood on by a horse, hitting head in the starting gates or horse striking riders head with its head.

Where a rider is assessed to have suspected concussion, the Rider must be stood down from riding immediately and managed in accordance with this Policy.

Any Rider who has suspected concussion must be assessed by a medical practitioner as early as reasonably practicable, to confirm the diagnosis or otherwise. This may include their General Practitioner, an Urgent Care Centre, or Hospital Emergency Department.

A Rider with suspected concussion may not participate in races until an assessment by a Medical Practitioner confirms that they do not have concussion.

A Rider who has their diagnosis of concussion confirmed by the Medical Practitioner is to be managed in accordance with this Policy.

10. Notification of Confirmed Concussions/Suspected Concussions to NZMO

At racing events and training under the jurisdiction of NZTR, all concussions and suspected concussions must be reported to the NZTR Medical Officer.

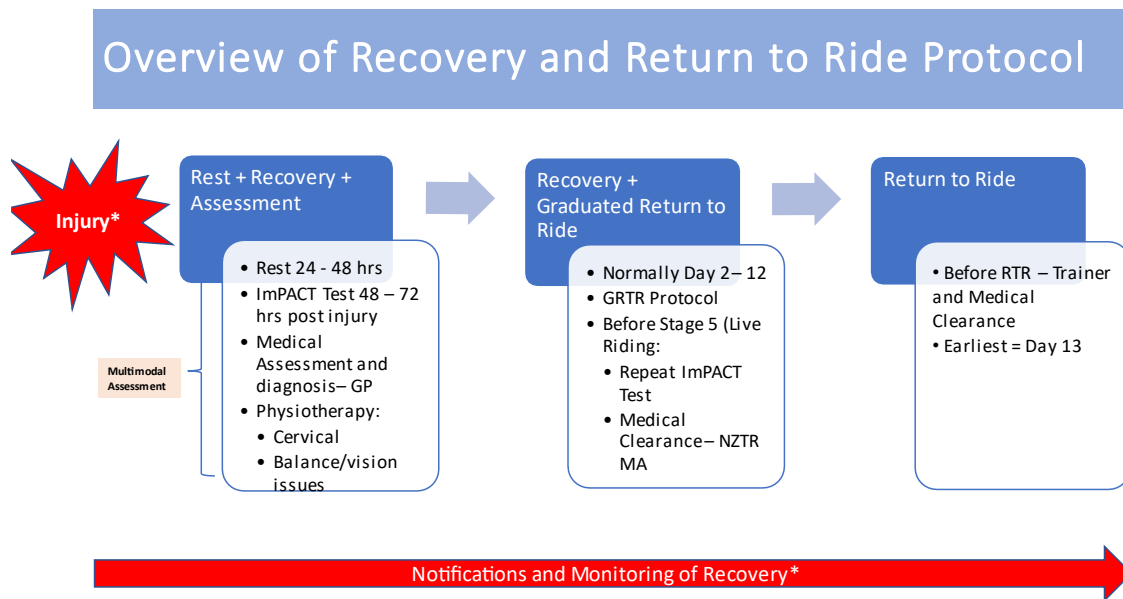
All suspected concussions assessed by a Medical Practitioner and determined to have not sustained a concussion must be notified to the NZTR Medical Officer.

All Riders who have a diagnosis of concussion confirmed are to be notified to the NZTR Medical Officer in accordance with this Protocol and are to enter the Recovery and Return to Ride Protocol.

11. Recovery and Return to Riding

A Rider who is diagnosed to have suffered a concussion, may not ride in races for at least 12 days and must be cleared fit to ride by the NZTR Medical Officer before doing so. The period between the time of the concussion and the time the Rider is cleared fit to ride is hereinafter referred to as the “Stand Down Period”. “Stood Down” has a corresponding meaning.

An overview of the NZTR Recovery and Return to Riding:

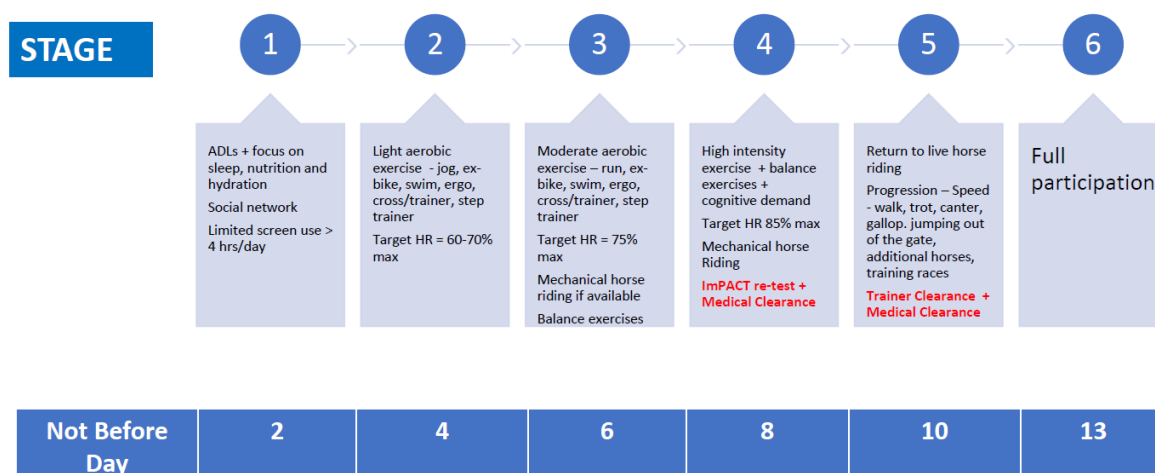


12. Management of Concussions/Suspected Concussions by NZTR Medical Officer

NZTR Medical Officer will oversee the management of riders with diagnosed concussion in accordance with NZTR Concussion Management Clinical Policy.

13. Stages of the Graduated Return to Riding

An overview of the NZTR Graduated Return to Riding protocol is shown below.



14. Final Clearance to Ride.

Riders will not be allowed to ride in races unless and until the NZTR Medical Officer has approved the Rider’s return to race riding.

The NZTR Medical Officer will only approve the Rider’s return to race riding if the following conditions have been met:

- 14.1.1 the Rider is Symptom free and is not taking medication related to the concussion, and
- 14.1.2 a Neurocognitive Test shows that the Rider has returned to his or her baseline score, and
- 14.1.3 a Medical Practitioner has confirmed that the Rider is fit to resume race riding, and
- 14.1.4 the NZTR Medical Officer is satisfied that the Rider followed the Graduated Return to Riding Procedure as closely as practicable, and
- 14.1.5 all physiotherapy or other treatments related to the concussion have been completed, and
- 14.1.6 a Trainer or other person has confirmed that the Rider has returned to full riding activity, there is no technical impairment to the Rider and that the Rider remains symptom free.

15. Riders with Persistent Post-Concussion Symptoms or Abnormal Neurocognitive Testing.

Riders with PPCS will be referred to the ACC Concussion Service provided by NZTR preferred provider, Proactive. This should be undertaken in consultation with the NZTR Medical Officer.

Riders with abnormal neurocognitive testing will be assessed by an independent neuropsychologist. This will be organised by the NZTR Medical Officer through Proactive.

Any further referral for specialist neurology opinion on a Rider's ongoing fitness to ride will be arranged in consultation between the Rider's GP and the NZTR Medical Officer.
